

NOTES ON THE SPITTLEBUG GENUS *Ectemnonotum* (HOMOPTERA: CERCOPIDAE)¹

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ABSTRACT: *Cosmoscarta nigra* Atkinson is transferred to the genus *Ectemnonotum* Schmidt. *E. strangulation* Lallemand & Synave is synonymised with *E. fruhstorferi* (Jacobi) and *E. distant* var. *rubrovittatum* Schmidt with *E. distant* (Butler). *E. fruhstorferi* and *E. nigra* are reported from China and Laos, respectively, for the first time. Metcalf & Horton's (1934) record of *E. bivittatum* from China is rejected. Four lectotypes are designated. Syntypes of one Jacobi species found in the Natural History Museum, London, and four Schmidt species in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C., are reported.

While accumulating information on the spittlebug fauna of the Oriental region a number of taxonomic discrepancies in the genus *Ectemnonotum* were noted which require amendments. In this paper, I transfer one species previously recognised in *Cosmoscarta* to *Ectemnonotum*, propose two new synonyms, select four lectotypes, and provide new distributional data for *E. fruhstorferi* (Jacobi) and *E. nigra* (Atkinson). Metcalf & Horton's (1934) record of *E. bivittatum* from China is rejected. Syntypes of one Jacobi species recently found in the Natural History Museum, London, and five Schmidt species in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C., are also reported.

The specimens studied in the course of this work are deposited in the following institutions whose names are abbreviated in the text as follows:

BMNH – The Natural History Museum, London, UK; BPBM – Bernice P. Bishop Museum, Honolulu, Hawaii, USA; IZAS – Institute of Zoology, Academia Sinica, Beijing, China; MNHN – Muséum National d'Histoire Naturelle, Paris, France; MNHU – Museum für Naturkunde der Humboldt-Universität, Berlin, Germany; MVNH – Museum of Victoria Natural History, Victoria, Australia; NCSU – Department of Entomology Insect Collection, North Carolina State University, Raleigh, N.C., USA; SMTD – Staatliches Museum für Tierkunde, Dresden, Germany; TMNH – Tianjin Museum of Natural History, Tianjin, China; and USNM – [US National Museum] National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA.

Ectemnonotum nigra (Atkinson) NEW COMBINATION

Cosmoscarta nigra Atkinson, 1889: 335; Distant, 1908: 155; Lallemand, 1912: 135; Metcalf, 1961: 470. LECTOTYPE ♂, SIKKIM (BMNH), here designated [examined].

Gynopygoplax nigra (Atkinson); Lallemand & Synave, 1961: 34.

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Taxonomic note: Atkinson (1889) described *nigra* in *Cosmoscarta* Stål; Lallemand & Synave (1961), in their revision of world Cercopinae, transferred this species into *Gynopygoplax* Schmidt. I am here transferring *nigra* to *Ectemnonotum* Schmidt on the basis of the male genitalia.

This species was originally recorded by Atkinson (1889) from Sikkim. I here provide new locality records in China and Laos.

Distribution: Sikkim, China (Yunnan Province), Laos.

Specimens examined: Lectotype ♂, *Cosmoscarta nigra* Atkinson 1889, by present designation, Sikkim, '92-6', Atkinson Coll. (BMNH).

CHINA, YUNNAN PROVINCE: 1♂, nr. Cheli, 600 m, 22.iv.1957 (D. Panfilov); 1♂, 1♀, Cheli, Shihuiyao, 700 m, 26.iv.1957 (D. Panfilov); 1♀, Xishuangbanna, Mengla, 620-650 m, 4.v.1959 (S.F. Li) (all in IZAS). LAOS: 3♂, Luang-Prabang à Theng, 1888 (Pavie) (MNHN).

Ectemnonotum fruhstorferi (Jacobi)

Cosmoscarta fruhstorferi Jacobi, 1902: 23; 1905: 441, pl. 21, figs. 8, 8a. LECTOTYPE ♂, VIETNAM (SMTD), here designated [examined].

Ectemnonotum fruhstorferi (Jacobi); Schmidt, 1909: 297, 308.

Ectemnonotum strangulatum Lallemand & Synave, 1961: 83, 86, pl. 10, fig. 22. Holotype ♂, Laos (BMNH). [Examined by M.D. Webb on author's behalf.]. New synonymy.

Taxonomic note: *Cosmoscarta fruhstorferi* was described by Jacobi (1902) from an unspecified number of specimens from Tonkin, northern Vietnam. I have examined four male syntypes of *fruhstorferi* in SMTD and MNHU. One male syntype was also found in BMNH. Lallemand & Synave (1961) recorded *fruhstorferi* as *strangulatum* from Laos. I here provide new locality records for this species in China.

Distribution: Vietnam (Tonkin), Laos, China (Yunnan Province).

Specimens examined: Lectotype ♂, *Cosmoscarta fruhstorferi* Jacobi 1902, by present designation, [VIETNAM]: Central-Tonkin, Chien Hoa, Aug.-Sept., H. Fruhstorfer; Coll. A. JACOBI 1912-3; A. Jacobi, Typus; *fruhstorferi* Jac. (SMTD). Holotype ♂, *Ectemnonotum strangulatum* Lallemand & Synave 1961, LAOS: Pakneun, 24.ix.1918 (R. Salvaza) (BMNH). 1♂ paralectotype of *Cosmoscarta fruhstorferi* Jacobi 1902, same data as lectotype (SMTD); 2♂ paralectotypes of *Cosmoscarta fruhstorferi* Jacobi 1902, Tonkin (2♂ in MNHU; 1♂ in BMNH).

CHINA, YUNNAN PROVINCE: 3♂, Hekou, 80-200 m, 10.vi.1956 (K.R. Huang *et al.*); 1♂, same locality and altitude, but 12.vi.1956 (D. Panfilov); 9♂, Hekou, Xiaonanxi, 200 m, 8-12.vi.1956 (K.R. Huang *et al.*); 2♂, Xishuangbanna, Damenglong, 650 m, 6,14.vii.1958 (Y.R. Zhang); 1♀, Xishuangbanna, Mengla, 620-650 m, 13.xi.1958 (S.Y. Wang); 4♂, same locality and altitude, but 8,10,13.vii.1959 (S.F. Li); 3♂, 1♀, same locality and altitude, but 7.xi.1958 and 8,10.vii.1959 (F.J. Pu); 3♂, 2♀, same locality and altitude, but 19.xi.1958 and 12.vii.1959 (Y.R. Zhang); 6♂, same locality and altitude, but 7-9.vii & 28.viii.1959 (F.C. Zhang) (all in IZAS); 1♂, same locality, but 20.ix.1979 (S.L. Liu) (TMNH); 2♂, Xishuangbanna, Menglun, 650 m, 26,27.vii.1959 (F.J. Pu); 2♂, same locality and altitude, but 31.viii.1959 (F.C. Zhang); 6♂, same locality and altitude, but 22,23,25.vii & 3.viii.1959 (Y.R. Zhang); 11♂ & 1 specimen (without abdomen), same locality

and altitude, but 22.vii-1.viii.1959 (S.F. Li); 2♂, 1♀, Xishuangbanna, Mengzhe, 870-1200 m, 5-8.ix. 1958 (F.J. Pu); 1♂, same locality and altitude, but 6.ix.1958 (S.Y. Wang); 2♂, Xishuangbanna, Xiaomengyang, 850 m, 12.vii & 10.x.1959 (L.C. Zang); 1♀, same locality and altitude, but 3.ix.1957 (S.Y. Wang); 1♂, Xishuangbanna, Yunjinghong, 650 m, 19.vi.1958 (Y.R. Zhang) (all in IZAS). LAOS: 1♂, Tonpheng, 14.ix.1965 (native collector) (BPBM). VIETNAM: 1♂, Tonkin, Hoa-Binh (A. de Cooman) (IZAS).

Ectemnonotum distantii (Butler)

Cosmoscarta distantii Butler, 1874b: 672.

Ectemnonotum distantii (Butler); Schmidt, 1909: 307.

Ectemnonotum distantii var. *rubrovittatum* Schmidt, 1909: 297, 323; Metcalf, 1961: 497.

LECTOTYPE ♀, SUMATRA (MNHU), here designated [examined]. New Synonymy.

Ectemnonotum distantii var. *sanguineovittatum* [sic] Schmidt, 1909: 308.

Taxonomic note: Two spellings, *rubrovittatum* and *sanguineovittatum*, were used in Schmidt's (1909) original description of the new variety of *Ectemnonotum distantii*. Metcalf (1961) accepted *rubrovittatum* in his catalogue of world Cercopidae. Here, Metcalf (1961) is followed as first reviser and *rubrovittatum* is used.

Distribution: Indonesia (Sumatra).

Specimens examined: Lectotype ♀, *Ectemnonotum distantii* var. *rubrovittatum* Schmidt 1909, by present designation, Sumatra, excell. v. Studt G.; Type; *E. distantii* var. *rubrovittatum* Schmidt ♀ Edm. Schmidt determ. 1908 (MNHU).

SUMATRA: 3♂, 3♀, Westkuste, no date (F. Faber) (*Cosmoscarta distantii* Butl., Jacobi det.) (MNHU; IZAS).

Ectemnonotum bivittatum (LePeletier & Serville)

Cercopis bivittata LePeletier & Serville, 1825: 605.

Cercopis flavifascia Walker, 1851: 654.

Cosmoscarta bivittatum (LePeletier & Serville); Butler, 1874a: 256.

Ectemnonotum bivittatum (LePeletier & Serville); Schmidt, 1909: 303; Metcalf & Horton, 1934: 396, pl. 40, figs. 77, 82.

Taxonomic note: Metcalf & Horton (1934) in their Cercopoidea of China doubtly recorded *Ectemnonotum bivittatum* from China; they stated that "This species has been recorded from Java and Sumatra. We have a series from China without a definite locality, whether these were introduced into China or whether the label is an error, we have no way of telling." This Chinese record was later accepted by Wu (1935: 160) and Metcalf (1961: 494) in their catalogue of Chinese insects and catalogue of world Cercopidae, respectively. I have recently examined the specimens of *E. bivittatum* studied by Metcalf & Horton in NCSU. Their identifications are correct. Six specimens, each of which has Metcalf's identification label, were found; but they do not have any collecting labels. I

don't know why Metcalf and Horton (1934) believed that these specimens were collected from China. I also found five additional, unidentified specimens of *E. bivittatum* from Java in NCSU without Metcalf's identification labels. All specimens of the two groups proved to be the same species. It appears that the 6 "Chinese" specimens which Metcalf & Horton studied were probably from Java. No specimens of *E. bivittatum* have ever been reported by other investigators from China so it appears that the species does not occur in China.

Distribution: Indonesia (Borneo, Java, Sumatra) and Malaysia (Malacca, Sarawak).

Specimens examined: 2♂, 4♀, no data, *Ectemnonotum bivittatum* A. & S., Det. Z.P. Metcalf (NCSU). [INDONESIA]: 1♂, Java, Malang; 1♂, Java, Malang, '507'; 2♀, Java, Soekaboemi, Le Moul; 1♀, Java, Soekaboemi (all in NCSU); 1♂, 1♀, Bintang (Rottger), Cat. No. 5719; 2♂, Nord-Borneo (Rolle V.); 15♂, 7♀, Java, Kawi-Geb., 1219 m [4000 ft], no date (Thieme V.); 1♀, Java, Palabuan-Ratu (Axel Preyer S.G.); 1♀, Java, Tengger-Geb. (Fruhstorfer S.); 1♂, 1♀, Java, ?Hgg, Cat. No. 5718; 1♀, Ober-Langkat, Deli, 1894 (M. U de S.); 1♀, Sumatra (Excell. V. Stut. G.) (MNHU; IZAS). [MALAYSIA]: 1♂, Mallaca (Künstler) (MNHU); 1♀, Sarawak (Wallace) (*Cercopis flavifascia*) (VMNH).

Ectemnonotum rugosum Schmidt

Ectemnonotum rugosum Schmidt, 1909: 313; Lallemand, 1912: 142; Metcalf, 1961: 500; Lallemand & Synave, 1961: 86. LECTOTYPE ♂, SUMATRA (MNHU), here designated [examined].

Taxonomic note: This species was described from three males and three females from Sumatra. One female syntype recently found in the USNM is here designated as paralectotype.

Distribution: Indonesia (Sumatra).

Specimens examined: Lectotype ♂, by present designation, SUMATRA: Soekaranda, Dr. H. Dohrn S.; Type; *Ectemnonotum rugosum* Schmidt ♂ Edm. Schmidt determ. 1909 (MNHU); 1♀ paralectotype, same data as lectotype (USNM).

Ectemnonotum cochleatum Schmidt

Ectemnonotum cochleatum Schmidt, 1909: 301, 318, 324.

Taxonomic note: This species was described from two males and two females from Sumatra. One female syntype recently found in the USNM is reported here.

Distribution: Indonesia (Sumatra).

Specimen examined: 1♀ Syntype, Sumatra, Soekaranda Dr. H. Dohrn S.; Type; *Ectemnonotum cochleatum* Schmidt ♀ Edm. Schmidt determ. 1909 (USNM).

Ectemnonotum dohrni Schmidt

Ectemnonotum dohrni Schmidt, 1909: 298, 304, 323.

Taxonomic note: This species was described from two males and one female from Sumatra. One male syntype recently found in the USNM is reported here.

Distribution: Indonesia (Sumatra).

Specimen examined: 1 ♂ Syntype, Soekaranda Januar 1894 Dohrn; Type; *Ectemnonotum dohrni* Schmidt ♂ Edm. Schmidt determ. 1909 (USNM).

Ectemnonotum excellens Schmidt

Ectemnonotum excellens Schmidt, 1909: 311.

Taxonomic note: *Ectemnonotum excellens* Schmidt was described from seven males and five females from Sumatra. One female syntype recently found in the USNM is reported here.

Distribution: Indonesia (Sumatra).

Specimens examined: 1 ♀ Syntype, Sumatra Soekaranda Dr. H. Dohrn S.; Type; *Ectemnonotum ex[c]jellus* [sic] Schmidt ♀ Edm. Schmidt determ. 1909 (USNM).

SUMATRA: 1 ♂, no definite locality (Excels. V. Studt G.); 1 ♂, no definite locality (Rolle Y.); 1 ♂, 1 ♀, Deli (Martin, G.); 2 ♂, Ober Langkat, Deli, 1894 (M. U de S.); 1 ♂, 3 ♀, West Ruste (V. Faber) (MNHU; IZAS).

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